

SPI-CIS WFD: Using Knowledge Exchange to Improve End-User Participation

Dr. Tanya A. Warnars (twarnars@ceh.ac.uk)

1. Introduction

Too often the knowledge of research scientists is under exploited, however there is a need for researchers to be involved in decision making with both policy and the private sector. The use of appropriate tools can greatly facilitate this dialogue and overcome the culture and language barriers of the different sectors.

Water security has received much attention recently and outcomes from the project WATCH (Water and Global Change) are an example of maximising available communication mechanisms to highlight recent developments in this area.

2. Communication tools:

- Web portal to communicate technically evolved modelling capabilities e.g. displays modelling outcomes by river basins & using Google Earth function.
- Social media to increase appeal e.g. traditional news stories, also Facebook, Twitter, YouTube



In addition we found a variety of communication tools may increase impact, such as:

- On public awareness, attitudes, understanding, behaviour etc. from engaging with the public
- Providing professional advice, expert testimony
- Examples of direct exploitation or results by others
- Advise to policy makers through a 1 page summary of key science results

3. Data Availability

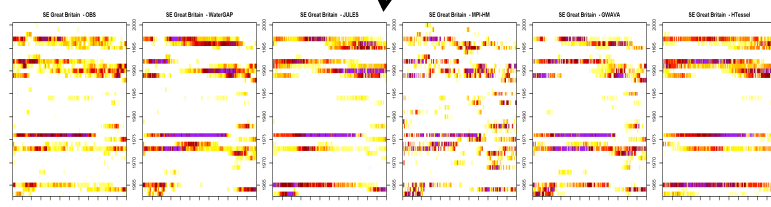
Providing data relevant to end-users greatly increases potential for dialogue and collaboration. WATCH aimed to clarify the vulnerability of global water resources to climate change. Its data rich legacy is publically available: www.eu-watch.org/data_availability



End users have low interest in raw data products but greater interest lies in developing interpretations of the results which can assist future planning such as for future water availability.

4. Addressing Key Questions

New approaches to visualisation can greatly assist in communicating pertinent issues such as: *How well do large-scale models reproduce regional hydrological extremes in Europe?*



Proportion of area under drought: 0.0 0.2 0.4 0.6 0.8 1.0

This novel approach developed by WATCH plots days (x-axis) against years (y-axis) & is colour-coded according to intensity: white = no drought in region; purple = highly spatially coherent drought

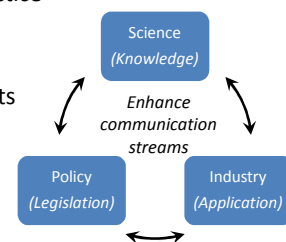
The viewer can immediately see very different drought characteristics between neighbouring regions or different models.

5. Establishing contacts

Successful knowledge exchange has good communication at its heart:

- Increase visibility using varied and numerous tools
- Exploit all forms of media coverage to raise awareness of recent findings (e.g. trade journals, TV, policy notes)
- Stay up to date with latest events and attend key meetings
- Listen to concerns of industry practitioners to align research priorities
- Personal contacts are important and WATCH outcomes have led to private sector contacts e.g. PepsiCo, ICMM, Bloomberg
- One-to-One focused meetings for effective uptake of results, direct involvement of industry can:

- Help identify knowledge gaps
- Help identify non-engagement and lack of uptake
- Generate improved uptake of Best Practice
- Improved linkages between sectors
- Identify new routes for participation
- Generate trust/belief in scientific results



6. Conclusion: Support tools and the right environment are needed to bring recent research findings to industry, stakeholders and policy makers. Communicating in clear language and listening to concerns, using a variety of media means better dissemination of key results. Drought and Flood atlases corroborated for the 20th C are useful tool for understanding future change in length and severity of drought and flood events. Many end-users are facing water scarcity and the tools for prediction and management need to be based on the most recent and relevant science.